

$$x_n = nx_1, \sigma_n = \sqrt{n\sigma_1},$$

where

$$x_1 = x_0 + \frac{1}{\sqrt{2\pi}g_n} \exp\left[-0.5\left(\frac{x_o}{\sigma_0}\right)^2\right] \sigma_1^2 = \sigma_0^2 + x_1(x_0 - x_1).$$